AMENDMENTS TO THE CLAIMS:

Please cancel Claims 19, 20, 29, 30, 35, 38, 39, 49, 50, 55, and 58 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 17, 18, 23, 24, 26, 27, 28, 33, 34, 36, 37, 47, 48, 53, 54, 56, and 57 as follows:

1. (Cancelled)

2. (Withdrawn) A method comprising prioritizing transport level packets for transmission wherein at least one of the following conditions is satisfied:

(a) transport level packets containing real time traffic are assigned a higher priority for transmission than transport level packets containing broadcast traffic;

(b) transport level packets containing broadcast traffic are assigned a higher priority for transmission than transport level packets containing interactive TCP traffic;

(c) transport level packets containing interactive TCP traffic are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic; and

(d) transport level packets that are UDP packets are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic.

3. (Withdrawn) A method according to Claim 2, wherein condition (a) is satisfied.

4. (Withdrawn) A method according to Claim 2, wherein condition (b) is satisfied.

5. (Withdrawn) A method according to Claim 2, wherein condition (c) is satisfied.

6. (Withdrawn) A method according to Claim 2, wherein condition (d) is satisfied.

7. (Withdrawn) A method according to Claim 2, wherein any two of conditions (a) through (d) are satisfied.

8. (Withdrawn) A method according to Claim 2, wherein all of conditions (a) through (d) are satisfied.

9. (Withdrawn) An apparatus comprising:

a packet prioritizer that is configured to prioritize transport level packets for transmission wherein at least one of the following conditions is satisfied:

(a) transport level packets containing real time traffic are assigned a higher priority for transmission than transport level packets containing broadcast traffic;

(b) transport level packets containing broadcast traffic are assigned a higher priority for transmission than transport level packets containing interactive TCP traffic;

(c) transport level packets containing interactive TCP traffic are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic; and

(d) transport level packets that are UDP packets are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic.

10. (Withdrawn) An apparatus according to Claim 9, wherein condition (a) is satisfied.

11. (Withdrawn) An apparatus according to Claim 9, wherein condition (b) is satisfied.

12. (Withdrawn) An apparatus according to Claim 9, wherein condition (c) is satisfied.

13. (Withdrawn) An apparatus according to Claim 9, wherein condition (d) is satisfied.

14. (Withdrawn) An apparatus according to Claim 9, wherein any two of conditions (a) through (d) are satisfied.

15. (Withdrawn) An apparatus according to Claim 9, wherein all of conditions (a) through (d) are satisfied.

16. (Withdrawn) Computer executable code that is configured to effect a method comprising a step of prioritizing transport level packets for transmission so that UDP packets are given a higher priority for transmission than TCP packets.

17. (Currently Amended) A gateway for use in a system wherein a ~~source~~ first apparatus, said gateway, and a ~~destination~~ second apparatus are in a TCP/IP network, wherein the source apparatus, said gateway, and the second apparatus have different IP addresses, said gateway comprising:

a packet receiving unit that is configured to receive a packet addressed at the IP level from the ~~destination~~ first apparatus to the ~~source~~ second apparatus; and

a service plan determining unit that is configured to determine a level of service subscribed to by a user of the first apparatus;

a ~~transport level window size controlling~~ throttling unit that is configured to ~~control~~ throttle the user of the first apparatus by (a) adjusting the transport level window size of the packet ~~received by said packet receiving unit~~ in accordance with (1) the level of service subscribed to by the user of the first apparatus and (2) bandwidth usage associated with the ~~destination apparatus~~ user of the first apparatus, and (b) sending the so adjusted packet to the second apparatus,

~~wherein the source apparatus, said gateway, and the destination apparatus~~
~~have different IP addresses, and~~

wherein the packet received by said packet receiving unit ~~of said gateway~~ has, as its source IP address, the IP address of the ~~destination~~ first apparatus, and has, as its destination IP address, the IP address of the ~~source~~ second apparatus

18. (Currently Amended) A gateway according to Claim 17, wherein the bandwidth usage is measured as an amount of data ~~sent to the destination apparatus~~ per unit of time.

19 - 20. (Cancelled)

21. (Previously Presented) A gateway according to Claim 17, wherein the bandwidth usage is expressed as an average throughput.

22. (Previously Presented) A gateway according to Claim 17, wherein the bandwidth usage is determined using a leaky bucket analysis.

23. (Currently Amended) A gateway for use in a system wherein a <u>source</u> first apparatus, said gateway, and a <u>second</u> ~~destination~~ apparatus are in a TCP/IP network, <u>each of the first apparatus, said gateway, and the second apparatus having different IP addresses,</u> said gateway comprising:

a ~~throughput controlling~~ throttling unit that is configured to (a) determine the number of TCP connections that are open and (b) <u>throttle a user of the first apparatus</u> ~~control throughput of data, sent through the TCP/IP network from the source apparatus addressed to the destination apparatus,~~ in accordance with <u>(1)</u> the determination of the number of TCP connections that are open <u>and (2) a level of service subscribed to by the user of the first apparatus.~~;~~</u>

~~wherein the source apparatus, said gateway, and the destination apparatus have different IP addresses.~~

24. (Currently Amended) A gateway for use in a system wherein a ~~source~~ <u>first</u> apparatus, said gateway, and a ~~destination~~ <u>second</u> apparatus are in a TCP/IP network, <u>each of the first apparatus, said gateway, and the second apparatus having different IP addresses,</u> said gateway comprising:

a ~~throughput controlling~~ throttling unit that is configured to ~~control throughput of data, sent through the TCP/IP network from the source apparatus addressed to the destination apparatus,~~ <u>throttle a user of the first apparatus</u> in accordance with <u>(1)</u> a leaky bucket analysis of [[a]] <u>the</u> user's throughput <u>and (2) a level of service subscribed to by the user,</u>

<u>wherein said throttling unit intercepts a packet on a TCP/IP connection between the first apparatus and the second apparatus; and</u>

~~wherein the source apparatus, said gateway, and the destination apparatus have different IP addresses, and~~

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~~wherein said gateway intercepts the data sent from the source apparatus that is addressed to the destination apparatus, to control the throughput of the same using said throughput controlling unit.~~

wherein one of the following two conditions is satisfied: (1) said throttling unit effects the throttling by discarding the packet and (2) said throttling unit effects throttling by modifying a field in the packet.

25. (Cancelled)

26. (Currently Amended) An apparatus according to Claim ~~25~~ 17, wherein said ~~transport level window size controller controls the transport level window size of the packet in accordance with the source IP address of the packet by reducing the transport level window size in response to~~ throttling unit compares bandwidth usage ~~associated with the source IP address exceeding~~ to a threshold.

27. (Currently Amended) A method for use in a system wherein a first apparatus, a gateway, and a second apparatus are in a TCP/IP network, each of the first apparatus, the gateway, and the second apparatus having different IP addresses, said method comprising:

~~receiving by a~~ intercepting by the gateway ~~for use in a system wherein a source apparatus, the gateway, and a destination apparatus are in a TCP/IP network,~~

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of a packet addressed at the IP level from the ~~destination~~ first apparatus to the ~~source~~

second apparatus; and

determining a level of service subscribed to by a user of the first apparatus;

determining whether or not to throttle a user of the first apparatus in

accordance with (a) the level of service and (b) bandwidth usage by the user;

throttling by the gateway of the user of the first apparatus in accordance with a

determination in said determining step that the user of the first apparatus should be

throttled, said throttling comprising (1) adjusting, ~~controlling~~ by the gateway, of the

transport level window size of the packet received in said receiving step and (2) sending

the so adjusted packet to the second apparatus, ~~in accordance with bandwidth usage~~

~~associated with the destination apparatus, wherein the source apparatus, the gateway,~~

~~and the destination apparatus have different IP addresses, and~~

wherein the packet received in said receiving step has, as its source IP

address, the IP address of the ~~destination~~ first apparatus, and has, as its destination IP

address, the IP address of the ~~source~~ second apparatus.

28. (Currently Amended) A method according to Claim 27, wherein the

bandwidth usage is measured as an amount of data ~~sent to the destination apparatus~~

per unit of time.

29 - 30. (Cancelled)

31. (Previously Presented) A method according to Claim 27, wherein the bandwidth usage is expressed as an average throughput.

32. (Previously Presented) A method according to Claim 27, wherein the bandwidth usage is determined using a leaky bucket analysis.

33. (Currently Amended) A method comprising:

determining a number of TCP connections that are open; and

~~controlling~~ throttling, by a gateway for use in a system wherein a ~~source~~ first apparatus, the gateway, and a ~~destination~~ second apparatus are in a TCP/IP network, of ~~throughput of data, sent through the TCP/IP network from the source apparatus~~ ~~addressed to the destination apparatus~~ of a user of the first apparatus, in accordance with (1) the determination of the number of TCP connections that are open and (2) a level of service subscribed to by the user.[[,]]

~~wherein the source apparatus, the gateway, and the destination apparatus~~ ~~have different IP addresses.~~

34. (Currently Amended) A method comprising:

~~controlling~~ throttling by a gateway for use in a system wherein a ~~source~~ first apparatus, the gateway, and a ~~destination~~ second apparatus are in a TCP/IP network, of ~~throughput of data, sent through the TCP/IP network from the source apparatus~~ ~~addressed to the destination apparatus~~ of a use of the first apparatus, in accordance

with (1) a leaky bucket analysis of [[a]] the user's throughput and (2) a level of service subscribed to by the user,

wherein the ~~source~~ first apparatus, the gateway, and the ~~destination~~ second apparatus have different IP addresses, and

wherein the gateway intercepts ~~data sent from the source apparatus that is addressed to the destination apparatus, to control the throughput of the same~~ a packet on a TCP/IP connection between the first apparatus and the second apparatus and wherein one of the following two conditions are satisfied: (1) said throttling comprises discarding of the packet and (2) said throttling comprises modifying a field in the packet.

35. (Cancelled)

36. (Currently Amended) A method according to Claim ~~35~~ 34, wherein said ~~controlling step controls the transport level window size of the packet in accordance with the source IP address of the packet by reducing the transport level window size~~ throttling step comprises modifying the transport level window size field of the packet in response to bandwidth usage ~~associated with the source IP address~~ exceeding a threshold.

37. (Currently Amended) A gateway according to Claim 18, wherein ~~said transport level window size controlling unit modifies~~ the transport level window size is the TCP window size field of the packet.

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38 - 39. (Cancelled)

40. (Withdrawn) An apparatus comprising:

packet prioritizing means for prioritizing transport level packets for transmission wherein at least one of the following conditions is satisfied:

(a) transport level packets containing real time traffic are assigned a higher priority for transmission than transport level packets containing broadcast traffic;

(b) transport level packets containing broadcast traffic are assigned a higher priority for transmission than transport level packets containing interactive TCP traffic;

(c) transport level packets containing interactive TCP traffic are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic; and

(d) transport level packets that are UDP packets are assigned a higher priority for transmission than transport level packets containing bulk TCP traffic.

41. (Withdrawn) An apparatus according to Claim 40, wherein condition (a) is satisfied.

42. (Withdrawn) An apparatus according to Claim 40, wherein condition (b) is satisfied.

43. (Withdrawn) An apparatus according to Claim 40, wherein condition (c) is satisfied.

44. (Withdrawn) An apparatus according to Claim 40, wherein condition (d) is satisfied.

45. (Withdrawn) An apparatus according to Claim 40, wherein any two of conditions (a) through (d) are satisfied.

46. (Withdrawn) An apparatus according to Claim 40, wherein all of conditions (a) through (d) are satisfied.

47. (Currently Amended) A gateway for use in a system wherein a ~~source~~ first apparatus, said gateway, and a ~~destination~~ second apparatus are in a TCP/IP network, each of the first apparatus, said gateway, and the second apparatus having different IP addresses, said gateway comprising:

packet receiving means for receiving a packet addressed at the IP level from the ~~destination~~ first apparatus to the ~~source~~ second apparatus; ~~and~~

service plan determining means for determining a level of service subscribed to by a user of the first apparatus; and

~~transport level window size controlling~~ throttling means for throttling a user of the first apparatus by adjusting ~~controlling~~ the transport level window size of the packet received by said packet receiving means in accordance with (1) the level of service subscribed to by the user of the first apparatus and (2) bandwidth usage associated with the ~~destination~~ user of the first apparatus,

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~~wherein the source apparatus, said gateway, and the destination apparatus have different IP addresses, and~~ wherein the packet received by said packet receiving means of said gateway has, as its source IP address, the IP address of the ~~destination~~ <u>first</u> apparatus, and has, as its destination IP address, the IP address of the ~~source~~ <u>second</u> apparatus.

48. (Currently Amended) A gateway according to Claim 47, wherein the bandwidth usage is measured as an amount of data ~~sent to the destination apparatus~~ per unit of time.

49 - 50. (Cancelled)

51. (Previously Presented) A gateway according to Claim 47, wherein the bandwidth usage is expressed as an average throughput.

52. (Previously Presented) A gateway according to Claim 47, wherein the bandwidth usage is determined using a leaky bucket analysis.

53. (Currently Amended) A gateway for use in a system wherein a ~~source~~ <u>first</u> apparatus, said gateway, and a ~~destination~~ <u>second</u> apparatus are in a TCP/IP network, <u>each of the first apparatus, said gateway, and the second apparatus having a different IP address,</u> said gateway comprising:

~~throughput controlling~~ throttling means for determining a number of TCP connections that are open and for ~~controlling throughput of data, sent through the TCP/IP network from the source apparatus addressed to the destination apparatus~~ throttling a user of the first apparatus, in accordance with (1) the determination of the number of TCP connections that are open and (2) a level of service subscribed to by the user[[,]]

~~wherein the source apparatus, said gateway, and the destination apparatus have different IP addresses.~~

54. (Currently Amended) A gateway for use in a system wherein a ~~source~~ first apparatus, said gateway, and a ~~destination~~ second apparatus are in a TCP/IP network, said gateway comprising:

~~throughput controlling~~ throttling means for ~~controlling throughput of data, sent through the TCP/IP network from the source apparatus addressed to the destination apparatus~~ throttling a user of the first apparatus, in accordance with (1) a leaky bucket analysis of a user's throughput and (2) a level of service subscribed to by the user,

~~wherein the source apparatus, said gateway, and the destination apparatus have different IP addresses, and~~

~~wherein said gateway intercepts data sent from the source apparatus that is addressed to the destination apparatus, to control the throughput of the same using said throughput controlling means.~~

wherein said throttling means intercepts a packet on a TCP/IP connection between the first apparatus and the second apparatus, and

wherein one of the following conditions is satisfied: (1) said throttling means effects the throttling by discarding the packet and (2) said throttling means effects the throttling by modifying the packet.

55. (Cancelled)

56. (Currently Amended) An apparatus according to Claim ~~55~~ 53, wherein ~~said transport level window size controlling means controls the transport level window size of the packet in accordance with the source IP address of the packet by reducing the transport level window size in response to~~ said throttling means compares bandwidth usage ~~associated with the source IP address exceeding~~ to a threshold.

57. (Currently Amended) A gateway according to Claim 48, wherein said ~~transport level window size controlling~~ throttling means modifies the TCP window size field of the packet.

58. (Cancelled)